



WISCONSIN DNR FISHERIES INFORMATION SHEET

LAKE: TWO SISTERS

COUNTY: ONEIDA

YEAR: 2005

The Department of Natural Resources surveyed Two Sisters Lake, Oneida County, from April 18 through June 9, 2005, to determine the health of its fishery. The survey was designed to take a comprehensive look at the lake's fishery. Two Sisters Lake is a deep, clear spring lake with predominantly sand and gravel substrate and a moderate-density walleye population. It has a surface area of 719 acres, 9.3 miles of shoreline and a maximum depth of 63 feet.

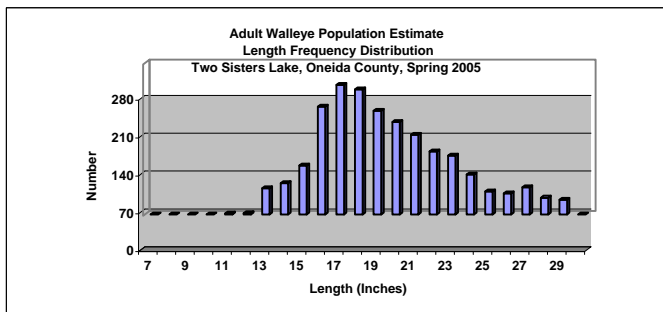


Figure 1. Length frequency distribution of 1868 adult* walleye estimated to be in Two Sisters Lake, Oneida County, based on a spring 2005 survey.

* Note: Adult walleye are defined as all sexable walleye and walleye of unknown sex ≥ 15 inches long.

Walleye

We conducted a mark-recapture survey of Two Sisters Lake's adult* walleye population from April 18-24, 2005. We captured and marked (fin clipped) 614 adult walleye in five days of fyke netting. A crew sampled Two Sisters Lake with an electro-fishing boat on April 24th and captured 217 adult walleye. Approximately 36% (79 of 217) of those walleye bore the fin clip given during fyke netting.

Based on those results, we estimated that Two Sisters Lake was home to 1868 adult walleye (2.6/acre). Approximately 94% (1757 of 1868) of adult walleye were 15 inches long or larger. An impressive one in 10 adult walleye were 25 inches long or larger. The largest walleye we captured was a 29.7-inch female.

Smallmouth Bass

We also completed a mark-recapture survey of Two Sisters Lake's smallmouth bass population* from April 18 through June 9, 2005. We captured and marked (fin clipped) 141 smallmouth bass through June 2nd. An electro-fishing crew captured 98 smallmouth bass on June 9th. Approximately 18% (18 of 98) of those smallmouth had been marked in previous sampling.

From those results, we estimated that 701 smallmouth bass (1.0/acre), 8-inches or larger, inhabited Two Sisters Lake. Nearly 12% (84 of 701) of those smallmouth were 14 inches long or larger. The biggest smallmouth we captured was 19.7 inches long.

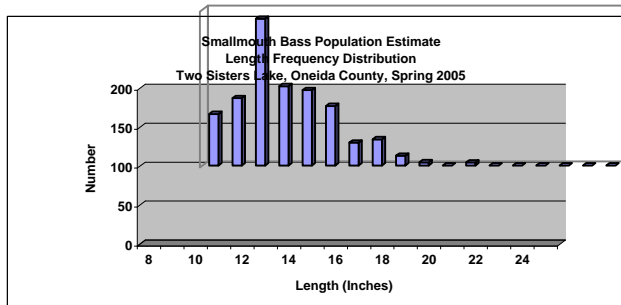


Figure 2. Length frequency distribution of 701 smallmouth bass ≥ 8 " estimated to be in Two Sisters Lake, Oneida County, based on a spring 2005 survey.

* Note: All values given above are for smallmouth bass 8 inches long or larger.

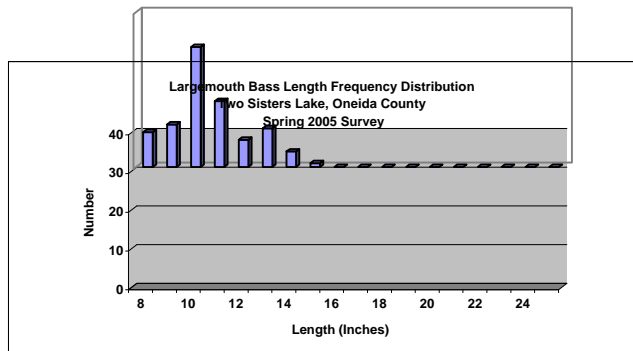


Figure 3. Length frequency distribution of 90 largemouth bass ≥ 8 " captured during a fisheries survey of Two Sisters Lake, Oneida County, in spring 2005.

Largemouth Bass

We captured 90 largemouth bass, 8 inches or larger, during our fyke netting and electro-fishing sampling of Two Sisters Lake. Approximately 6% (5 of 90) of those largemouth were 14 inches long or larger. The biggest largemouth bass we captured was 15.2 inches long.

* Note: All values given above are for largemouth bass 8 inches long or larger.

Northern Pike

We captured 41 adult* northern pike in fyke nets fished in Two Sisters Lake from April 18-22, 2005. Nearly 93% (38 of 41) of adult northern pike we captured were less than 26 inches long. The largest northern pike we captured was a 26.7-inch female.

* Note: Adult northern pike are defined as all sexable northern pike and northern pike of unknown sex ≥ 12 inches long.

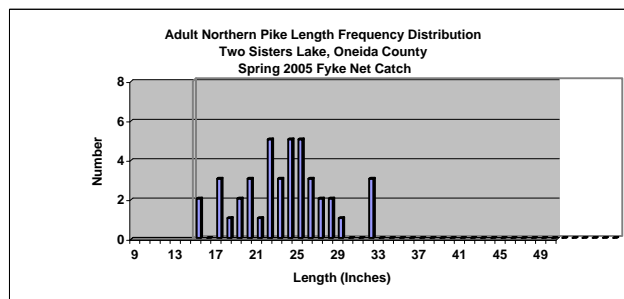


Figure 4. Length frequency distribution of 41 adult* northern pike captured in fyke nets during a fisheries survey of Two Sisters Lake, Oneida County, in spring 2005.

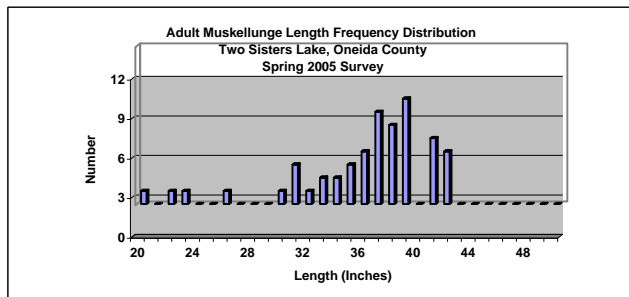


Figure 5. Length frequency distribution of 50 adult* muskellunge captured during a fisheries survey of Two Sisters Lake, Oneida County, in spring 2005.

Muskellunge

We captured 50 adult* muskellunge during our fyke netting and electro-fishing sampling of Two Sisters Lake. Seventy-eight percent (39 of 50) of the adult muskellunge we captured were 34 inches long or larger. Nine of the 50 muskellunge we captured were 40 inches long or larger. The largest muskellunge we captured was a 42.8-inch female.

* Note: Adult muskellunge are defined as all sexable muskellunge and muskellunge of unknown sex ≥ 20 inches long.

Other Species

We captured 12 species of fish in our fyke netting and electro-fishing sampling of Two Sisters Lake in addition to the game fish mentioned above. Bluegill, rock bass and yellow perch were common in our fyke net catches. We also caught black bullhead, black crappie, common shiner, creek chub, golden shiner, greater redhorse, pumpkinseed, white sucker and yellow bullhead. Young-of-year walleye will be sampled in fall 2005. Additional sampling with fyke nets is planned for spring 2006 to capture muskellunge and complete a population estimate.

We are also conducting a creel (angler harvest) survey on Two Sisters Lake this year. Creel clerk Dave Stahmer will count and interview anglers and examine their catch throughout the 2005 open-water fishing season.

Table 1. General Fishing Regulations for Two Sisters Lake, Oneida County, 2005

FISH SPECIES	OPEN SEASON	DAILY LIMIT	MINIMUM LENGTH
Walleye	May 7 - March 5	3	15 inches
Largemouth and Smallmouth Bass	May 7 - June 17 (C&R) June 18 - March 5 (Harvest)	None 5 in total	14 inches
Muskellunge	May 28 - Nov. 30	1	40 inches
Northern Pike	May 7 - March 5	5	None

A brief summary of selected fishing regulations for Two Sisters Lake is included above (Table 1). While the regulatory information provided was current at the time the surveys were conducted, it is not comprehensive and should not be used as a substitute for the current fishing regulation pamphlet. You may obtain a copy of current fishing regulations when you purchase your fishing license, or download a copy from our web site at:

<http://www.dnr.state.wi.us/org/water/fhp/fish/>

This report is interim only; data and findings should not be considered final. Results of creel surveys should be available by June 2006. If you are interested in a summary of the creel survey or want an update on this year's fyke netting and electro-fishing survey results, contact:

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